

15A NCAC 02D .0504 PARTICULATES FROM WOOD BURNING INDIRECT HEAT EXCHANGERS

(a) This Rule applies to fuel burning equipment that burns 100 percent wood. All other fuel burning equipment that burns both wood and other fuels in combination shall be subject to 15A NCAC 02D .0503. For the purpose of this Rule, the following definitions shall apply:

- (1) "Functionally dependent" means that structures, buildings or equipment are interconnected through common process streams, supply lines, flues, or stacks.
- (2) "Indirect heat exchanger" means any equipment used for the alteration of the temperature of one fluid by the use of another fluid in which the two fluids are separated by an impervious surface such that there is no mixing of the two fluids.
- (3) "Plant site" means any single or collection of structures, buildings, facilities, equipment, installations, or operations that:
 - (A) are located on one or more adjacent properties;
 - (B) are under common legal control; and
 - (C) are functionally dependent in their operations.

(b) The definition contained in Subparagraph (a)(3) of this Rule does not affect the calculation of the allowable emission rate of any indirect heat exchanger permitted prior to April 1, 1999.

(c) Emissions of particulate matter from the combustion of wood shall not exceed:

Maximum Heat Input In Million Btu/Hour	Allowable Emission Limit For Particulate Matter In lb/Million Btu
Up to and Including 10	0.70
100	0.41
1,000	0.25
10,000 and Greater	0.15

For a heat input between any two consecutive heat inputs stated in the table set forth in this Paragraph, the allowable emissions of particulate matter shall be calculated by the equation $E = 1.1698 * Q^{-.2230}$. "E" equals the allowable emission limit for particulate matter in lb/million Btu. "Q" equals the Maximum heat input in million Btu/hour.

(d) This Rule applies to installations in which wood is burned for the primary purpose of producing heat or power by indirect heat transfer.

(e) For the purpose of this Rule, the heat content of wood shall be 8,000 Btu per pound (dry-weight basis). The sum of maximum heat inputs of all wood burning indirect heat exchangers at a plant site that are in operation, under construction, or permitted pursuant to 15A NCAC 02Q, shall be considered as the total heat input for the purpose of determining the allowable emission limit for particulate matter for each wood burning indirect heat exchanger. Wood burning indirect heat exchangers constructed or permitted after February 1, 1983, shall not change the allowable emission limit of any wood burning indirect heat exchanger whose allowable emission limit has previously been set. The removal of a wood burning indirect heat exchanger shall not change the allowable emission limit of any wood burning indirect heat exchanger subject to this Rule whose allowable emission limit has previously been established. However, for any wood burning indirect heat exchanger subject to this Rule constructed after, or in conjunction with, the removal of another wood burning indirect heat exchanger at the plant site, the maximum heat input of the removed wood burning indirect heat exchanger shall no longer be considered in the determination of the allowable emission limit of any wood burning indirect heat exchanger subject to this Rule constructed after or in conjunction with the removal. For facilities or institutions, such as military and educational, whose primary wood burning capacity is for comfort heat, only those wood burning indirect heat exchangers subject to this Rule located in the same power plant or building or otherwise physically interconnected, such as common flues, steam, or power distribution line shall be used to determine the total heat input.

History Note: Authority G.S. 143-213; 143-215.3(a)(1); 143-215.107(a)(5); 143-215.107(h)(1); Eff. February 1, 1976; Amended Eff. August 1, 2002; April 1, 1999; June 1, 1985; February 1, 1983; Readopted Eff. November 1, 2020.